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(54) Title: PROCESS FOR THE PREPARATION OF  $\alpha$ -SUBSTITUTED CARBOXYLIC ACIDS FROM THE SERIES COMPRISING  $\alpha$ -HYDROXYCARBOXYLIC ACIDS AND N-SUBSTITUTED- $\alpha$ -AMINOCARBOXYLIC ACIDS

(57) Abstract: The invention relates to a process for the preparation of  $\alpha$ -substituted carboxylic acids from the series comprising  $\alpha$ -hydroxycarboxylic acids and N-substituted- $\alpha$ -aminocarboxylic acids by cathodic carboxylation with carbon dioxide of a compound corresponding to the general formula  $R^1-C(=X)R^2$  which is constituted by aldehydes, ketones or N-substituted imines. This carboxylation has hitherto taken place in an undivided electrolytic cell with the use of a sacrificial anode. According to the invention the carboxylation takes place in the absence of a sacrificial anode in an electrolytic cell divided by a separator, at a diamond film cathode; the anode consists of a material which is stable under electrolytic conditions; in particular it is a diamond film electrode. The catholyte comprises an organic solvent and a conducting salt.



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